

IN THE SPECIFICATION

Please amend the paragraph beginning at page 10, line 3 as follows:

A1 Figure 5B shows instrumenting code that implements the sampling value profiler of Figure 5A. Instrumenting code 520 shows four instructions. In some embodiments, instrumenting code is inserted in a program being profiled at the beginning of a candidate reuse region. Instruction 522 sets one of two predicate registers (see Figure 8) to "true" and the other to "false" based on the outcome of a "compare" operation. The two predicate registers include a "true" predicate register shown as "pt," and a "false" predicate register shown as "pf." When, in instruction 522, the variable labeled "counter" is equal to zero, the true predicate register is set, and instructions 526 and 528 executed. The execution of instruction 526 results in the counter variable being reinitialized to the sampling interval "S," and the execution of instruction 528 results in a set-value "V₁" being profiled using a profiling function labeled "value_profile." Conversely, if the variable labeled "counter" is not equal to zero, the false predicate register is set, and instruction 524 executes. Each time instruction 524 executes, the counter is decremented.

Please amend the paragraph beginning at page 14, line 29 as follows:

A2 Figure 8 shows a processing system. Processing system 800 includes processor 820 and memory 830. In some embodiments, processor 820 is a processor capable of executing instrumented software for profiling top set-values and top location-values. Processor 820 can also be a processor capable of selecting good computation reuse regions from candidate reuse regions. Processing system 800 can be a personal computer (PC), mainframe, handheld device, portable computer, set-top box, or any other system that includes software. In some embodiments, the processor includes one or more predicate registers 840.